Shrink-Kon®

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What's New in this Catalog:

Clear Heat Shrink page N13

Flexible PVC Heat Shrink Tubing suitable for industrial and electronic applications. Allows user to inspect die and crimp details after installation of heat shrinkable insulation.

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Shrink-Kon®
Overview

Heavy Wall Shrink-Kon® Heat Shrinkable Insulators

When it comes to moisture-proofing connections and terminations, T&B's heat shrinkable tubing, boots, and end caps have proven themselves over years of service to the industry. Made of thermally stabilized cross-linked polyolefin, these heat-shrinkable insulators may be used over lead, steel, aluminum, copper, standard plastic and elastomeric insulating materials.

T&B heat shrinkable insulators are designed to be easy to use. They provide appropriate level of insulation and abrasion protection.

Where applicable, T&B heat shrink insulators are U.L. Listed. Also, all standard size insulators have an internally applied adhesive sealant.

T&B Heat Shrinkable Insulators Offer

- Heavy duty protection.
- A full range of sizes from #16 to 1000MCM.
- Insulation for 3" and 4" bus bar.
- Field-Proven reliability–rated 600V, 90°C.
- Improved protection against moisture is provided by the internal sealant.

New Products Include:

- High Shrink Ratio HSHR series with 6:1 shrink ratio designed for applications with extreme differences between cable, connector and back shell sizes.
- Flame Retardant HSFR series provides maximum flame retardancy. For special applications.

Heavy Wall Shrink-Kon® Heat Shrinkable End Cap, Boots

Redesigned for superior durability and performance!

Seals and insulates cable ends at a 600V rating. Installs fast, while providing insulation resistance to moisture, corrosion and abrasion. The extra thickness at the tip of the end cap prevents sharp ends of the cable from puncturing the seal.

Seals and insulates multi-conductor cables and conduit with the same cost savings and superior properties of T&B's heat shrinkable tubing. These boots replace time consuming tapes, epoxies, encapsulations and dips. The boots are internally coated with sealant.

Shrink-Kon® Medium Wall Tubing

More flexible than heavy wall products, with excellent resistance to impact and abrasion.

Shrink-Kon® Thin Wall Tubing

Manufactured from stabilized Polyolefin, these insulators are used to insulate bare Sta-Kon® splices and terminals. They additionally provide a degree of strain relief and may be used to harness wires. Available in cut pieces or reels. Colors also available.

New Products Include:

- 3:1 adhesive lined thin wall CPO-A series provides excellent flexibility with environmental sealing capability.
- 2:1 halogen free, low-smoke generating thin wall, CPO-HF series. For use in contained areas including underground transportation, shipboard, offshore, military and aerospace applications.
- Clear heat shrink.

Covers

These new insulating covers provide hard shell insulated protection for "H" type compression taps and splices, and, because there is no taping required, you get uniform quality and appearance each time. The exclusive locking design provides the range taking capability. Only five H-tap insulating catalog numbers accommodate the range of 6 AWG— 1000 MCM in the main, and 12 AWG— 500 MCM in the branch.

- Hard shell outer covers guard against impact…inner seal keeps out dust.
- Installs quickly and easily without special tools…simply snaps together.
- Eliminates time consuming taping.
- Provides high quality, neat, uniform installations.
- Range taking design reduces inventory.

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Shrink-Kon®

Heavy Wall Heat Shrinkable Tubing

Shrink Ratio 3:1

HS Series

- Heavy wall heat shrinkable tubing provides maximum reliability for insulating and protecting cable joints and terminations.
- Withstands severe mechanical requirements of U.R.D., submersible and direct burial installations.
- High impact, abrasion, corrosion and chemical resistance.
- Rated for 600V, 90°C continuous use.
- Thermoplastic adhesive liner provides complete environmental protection and insulation.
- Meets: UL 486D, CSA C22.2 No. 198.2, ANSI C119.1, Western Underground Guide Numbers 2.4, 2.5, ICEA and NEMA insulation thickness requirements.
- Continuous operating temperature: -55°C to 110°C.
- Shrink temperature 120°C.
- Shrink ratio 3:1.

T&B's heat shrinkable tubing is made of thermally stabilized cross-linked polyolefin. This provides a recovered wall thickness greater than that of the cable jacket replaced. The insulating covers which have an internally applied sealant offer protection against moisture, may be used over lead, steel, aluminum, copper, standard plastic and elastomeric insulating materials.

HS Series Heavy Wall Heat Shrinkable Tubing – Black

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nom. Recovered Wall (in.)	Std. Lgth.	Fits Any Listed or Certified Al or Cu Splice with Dim No Larger Than O.D.	Lgth.	Cable Range	Std. Pkg.
HS16-12	.350"	.120"	.070"	3 in.	1⅞₆₄"	1"	#14 to #10 AWG	100
HS16-12L				6 in.				25
HS16-12-4				4 ft.				50
HS12-6	.510"	.160"	.090"	3 in.	⅜"	1¾"	#8 to #6 AWG	100
HS12-6L				6 in.				25
HS12-6-4				4 ft.				50
HS6-1	.750"	.240"	.090"	4 in.	⅝"	2½"	#6 to #2 AWG	25
HS6-1L				8 in.				25
HS6-1-4				4 ft.				50
HS4-30	1.100"	.350"	.120"	5 in.	¾"	3¼"	#1 to 3/0 AWG	20
HS4-30L				9 in.				10
HS4-30-4				4 ft.				50
HS40-400	1.500"	.470"	.160"	8 in.			2/0 to 350 MCM	10
HS40-400L				12 in.				10
HS40-400-4				4 ft.				50
HS500-1000	2.00"	.630"	.160"	9 in.			250 MCM to 600 MCM	5
HS500-1000L				15 in.				10
HS500-1000-4				4 ft.				20
HS12-30**	3.540"	1.180"	.160"	12 in.	—		750 MCM to 1250 MCM	10
HS30-30**				30 in.				10
HS30-4**				4 ft.				5
HS12-40**	4.720"	1.570"	.170"	12 in.	—		1500 MCM to 2500 MCM	5
HS30-40**				30 in.				5
HS40-4**				4 ft.				1

All lengths have factory applied sealant.
For other sizes and lengths consult factory.
U.L. File No. E9809, U.L. 486D.
** Not U.L. Listed.

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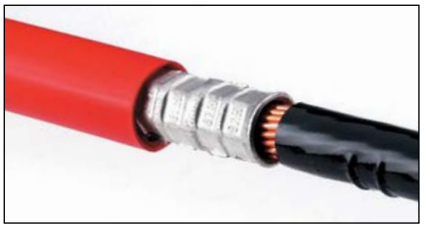

HS Series Heavy Wall Heat Shrinkable Tubing – Red

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Lgth. (in.)	For 2-Way Connector Cable Sizes	Std. Pkg.
HS12-6LR	.510"	.160"	6"	#8-6 AWG	1
HS6-1LR	.750"	.240"	8"	#6-2 AWG	25
HS4-30LR	1.100"	.350"	9"	#1-3/0 AWG	10

All lengths have factory applied sealant.
U.L. File No. E9809, U.L. 486D

Heavy Wall Tubing (25 ft. rolls) – Black

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Std. Pkg. (Rolls)
HS16-12-25	.350"	.120"	.070"	#14 - #10 AWG	1
HS12-6-25	.510"	.160"	.090"	#8 - #6 AWG	1
HS6-1-25	.750"	.240"	.090"	#6 - #2 AWG	1
HS4-30-25	1.100"	.350"	.120"	#1 - 3/0 AWG	1
HS40-400-25	1.500"	.470"	.160"	2/0 - 350 MCM	1
HS500-1000-25	2.000"	.630"	.160"	250 - 600 MCM	1

Order by reel, not by feet. 25 ft. reels **not** supplied with factory applied sealant.

Heavy Wall Tubing (25 ft. rolls) – Red

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Std. Pkg. (Rolls)
HS12-6-25R	.510"	.160"	.090"	#8 - #6	1

Order by reel, not by feet. 25 ft. reels **not** supplied with factory applied sealant.

Technical Data – HS Series

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	600%
Elongation after Heat Aging (168 hrs. at 150°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Longitudinal Change	ASTM D2671	+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No cracking
Specific Gravity	ASTM D792	1.1
Hardness (Shore D)	ASTM D2240	50D
ELECTRICAL		
Dielectric Strength	ASTM D149	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown, 24kV – 1 min., 15kV – 4 hrs.
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053	Good to Excellent
Fungus Resistance	ASTM G21	No Growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
ADHESIVE		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002	125 psi (.875 MPa)
Adhesive Softening Point	ASTM E28	92°C ±5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion

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Shrink-Kon®

Heavy Wall Heat Shrinkable Tubing

Shrink Ratio 6:1

HSHR Series – High Shrink Ratio

- **6:1 shrink ratio.**
- **Accommodates a wide variety of connector shapes and configurations.**
- **Thermoplastic Adhesive Liner for complete environmental protection and insulation.**
- **Continuous operating temperature: -55°C to 110°C.**
- **Shrink temperature: 120°C.**

HSHR Series Heavy Wall Heat Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pkg. (Rolls)
HSHR750-4	.75"	.125"	.103"	#22 - #46 AWG	48"	25
HSHR1300-4	1.30"	.222"	.118"	#8 - 700 AWG	48"	25
HSHR1750-4	1.75"	.293"	.128"	#4 - 1000 AWG	48"	25
HSHR2000-4	2.00"	.330"	.132"	#2 - 1250 AWG	48"	25
HSHR2750-4	2.75"	.460"	.139"	1/0 - 1500 MCM	48"	15
HSHR3500-4	3.50"	.580"	.146"	3/0 - 1750 MCM	48"	10
HSHR4700-4	4.70"	.780"	.152"	300 - 2000 MCM	48"	5

Standard color: black.

- Custom lengths available subject to factory quotations. Consult factory for availability.
- This item may require longer lead time for ordering. Minimum quantities may apply.

Technical Data – HSHR Series

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	600%
Elongation after Heat Aging (168 hrs. at 175°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Longitudinal Change	ASTM D2671	+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No cracking
Specific Gravity	ASTM D792	1.10
Hardness (Shore D)	ASTM D2240	50D
ELECTRICAL		
Dielectric Strength	ASTM D149, IEC 243	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown 15kV – 4 hrs.
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053/15	Good to Excellent
Fungus Resistance	ASTM G21	No Growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
ADHESIVE		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002	125 psi (.875 MPa)
Adhesive Softening Point	ASTM E28	92°C/-5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion

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Heavy Wall Heat Shrinkable Tubing

Shrink Ratio 3:1

HSFR Series – Flame Retardant Heavy Wall

- Heavy wall, heat shrinkable tubing insulates and protects electrical splices and terminations where maximum flame retardancy and exceptional insulating and sealing characteristics are required.
- High impact and abrasion resistance – capable of withstanding severe mechanical abuse of U.R.D., submersible and direct burial installations.
- HSFR tubing will not split or rupture during installation, even when overheated.
- Thermoplastic adhesive liner provides complete environmental protection and insulation.
- Meets: UL 486D, CSA 22.2 No. 198.2, ANSI C119.1, Western Underground Guide Nos. 2.4, 2.5, MIL-DTL-23053/15, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements.
- Rated for 600V, 90°C continuous use. Continuous operating temperature -55°C to 110°C.
- Shrink temperature 120°C.
- Shrink ratio 3:1

HSFR Series Heavy Wall Heat Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pack
HSFR16-12-4	.350"	.120"	.070"	#14 - #10 AWG	48"	25
HSFR12-6-4	.510"	.160"	.090"	#8 - #6 AWG	48"	25
HSFR6-1-4	.750"	.240"	.090"	#6 - #2 AWG	48"	25
HSFR4-30-4	1.100"	.350"	.120"	#1 - 3/0 AWG	48"	25
HSFR40-400-4	1.500"	.470"	.160"	2/0 - 350 MCM	48"	25
HSFR500-1000-4	2.000"	.630"	.160"	250 - 600 MCM	48"	25

Standard color: black.

- Custom lengths available subject to factory quotations. Consult factory for availability.
- This item may require longer lead time for ordering. Minimum quantities may apply.

Technical Data – HSFR Series

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	600%
Longitudinal Change	ASTM D2671	+1%, -10%
Specific Gravity	ASTM D792	1.2
Elongation after Heat Aging (168 hrs. at 175°C)	ASTM D2671, ISO 37	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No cracking or splitting
Hardness (Shore D)	ASTM D2240	50D
Oxygen Index	ASTM D2863	27.00
Flammability	ASTM D2671	Flame Retardant
ELECTRICAL		
Dielectric Strength	ASTM D149	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown 24kV – 1 min., 15kV – 4 hrs.
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053/5	Good to Excellent
Copper Corrosion	ASTM D2671	No Corrosion
Fungus Resistance	ASTM G21	No Growth
Water Absorption	ASTM D570	0.2%
ADHESIVE		
Adhesive Lap Shear (1 in./min. at 23°C)	ASTM D1002	125 psi (.875 MPa)
Adhesive Softening Point	ASTM E28	92°C ±5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Adhesive Water Absorption	ASTM D570	Less than 0.3%
Water Penetration	STM 706	No penetration after 286 hrs. of continuous immersion

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Shrink-Kon®
Heat Shrinkable End Caps

Shrink Ratio 3:1

HSC Series End Caps

- Redesigned for superior durability and performance!
- Heat shrinkable end caps provide a simple yet effective method for sealing cable ends, pipe conduit, or other similar objects where maximum flame retardancy is required.
- Superior resistance to weathering, moisture contamination and adverse environmental conditions.
- Flame retardant.
- Rated from 600/1000V, 90° continuous use.
- Resistant to common fluids and solvents.
- Adhesive liner provides complete environmental protection and insulation.
- Heat indicating lines. Continuous operating temperature: -55°C to 110°C.
- Shrink temperature 120°C.
- Shrink ratio 3:1.

Seals and insulates cable ends at a 600V rating. Installs fast, while providing insulation resistance to moisture corrosion and abrasion. The extra thickness at the tip of the end cap prevents sharp ends of the cable from puncturing the seal.

HSC Series Heat Shrinkable End Caps

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	A Recovered Wall (in.)	Code Cable Size	Nom. Length (in.)	Std. Pack
HSC8-4	.510"	.160"	.090"	#8 - #6 AWG	2½"	100
HSC2-20	.750"	.240"	.090"	#6 - #2 AWG	2½"	100
HSC30-250	1.100"	.350"	.120"	#1 - 3/0 AWG	3"	50
HSC300-600	1.500"	.470"	.160"	2/0 - 350 MCM	3¼"	50
HSC700-1000	2.000"	.630"	.160"	250 - 500 MCM	3½"	50
NEW **HSC750**	2.700"	.87"	.160"	600 - 1000 MCM	4"	10
HSC300*	3.500"	1.180"	.160"	800 - 1250 MCM	4½"	5
HSC500*	4.700"	1.570"	.170"	1500 - 2500 MCM	5½"	5

* Not U.L. Listed or CSA Certified

Material: Thermally stabilized, modified polyolefin provided with mastic sealant on I.D. applied approximately 1" deep.

Technical Data – HSC Series

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	550%
Elongation after Heat Aging (168 hrs. at 150°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Longitudinal Change on Recovery	ASTM D2671	+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No cracking
Specific Gravity	ASTM D792	1.10
Hardness (Shore D)	ASTM D2240	50D
ELECTRICAL		
Dielectric Strength	ASTM D149	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053	Good to Excellent
Fungus Resistance	ASTM G21	No Growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
SEAL INTEGRITY		
Adhesive Lap Shear (1 in./min. at 23°C)	ASTM D1002	130 psi (.91 MPa)
Adhesive Softening Point	ASTM E28	92°C ±-5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000 (mod.)	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion
Room temperature	168 hrs./40 psi	No leaks
Temp. Cycling (-40°C to 60°C)	50 cycles/15 psi	No leaks
Burst pressure		100 psi (0.70 MPa)

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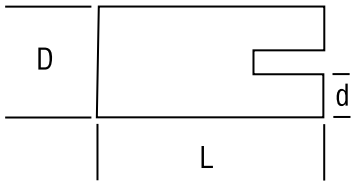
Heat Shrinkable Breakout Boots

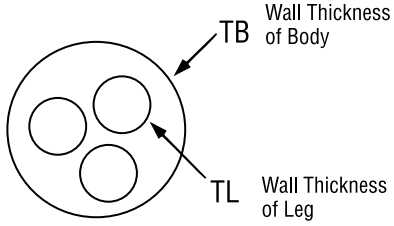
HSB Series – Heat Shrinkable Breakout Boots

- Boots for 2, 3 and 4 way cable breakouts.
- Strain relief and mechanical protection.
- Thermoplastic adhesive liner provides complete environmental protection and insulation.
- Shrink ratio accommodates a wide range of cables.
- Meets ESI 09-11.
- Continuous operating temperature: -55°C to 100°C.
- Shrink temperature: 135°C.

HSB Series Heat Shrinkable Breakout Boots

Cat. No.	No. Legs	D Expanded Dia. (Min.) in./mm	D Recovered Dia. (Min.) in./mm	d Expanded Dia. (Max.) in./mm	d Recovered Dia. (Max.) in./mm	L Recovered Length (Nom.) in./mm	Wall Thickness of Body (Nom.) in./mm	Wall Thickness of Leg (Nom.) in./mm	Application Legs 600V Conductor AWG/MCM
HSB200-75-2	2	1.97/50.0	0.83/21.0	0.90"/22.9	0.30"/7.6	4.69"/119.0	0.13"/3.2	0.13"/3.2	#3-300
HSB120-50-3	3	1.50"/38.1	0.65"/16.5	0.50"/12.7	0.16"/4.0	4.47"/113.5	0.11"/2.9	0.11"/2.9	#8-3/0
HSB170-82-3	3	2.20"/55.8	1.20"/30.4	0.89"/22.5	0.35"/9.0	7.09"/180.0	0.12"/3.0	0.12"/3.0	#1-600
HSB240-112-3	3	2.83"/72.0	1.46"/37.0	1.38"/35.0	0.69"/17.5	7.01"/178.0	0.16"/4.0	0.12"/3.0	300-1000
HSB125-50-4	4	1.38"/35.0	0.59"/15.0	0.47"/12.0	0.12"/3.0	3.74"/95.0	0.10"/2.5	0.08"/2.0	#12-2/0
HSB175-82-4	4	2.36"/60.0	1.18"/30.0	0.90"/22.9	0.25"/6.4	7.95"/202.0	0.16"/4.1	0.13"/3.3	#4-600
HSB265-120-4	4	3.10"/78.7	1.50"/38.1	1.40"/35.6	0.49"/12.50	9.45"/240.0	0.13"/3.3	0.13"/3.3	3/0-1000
HSB350-138-3	3	3.54"/90.0	1.38"/35.0	1.34"/34.0	0.55"/14.00	7.87"/200.0	0.12"/3.0	0.08"/2.0	4/0-1000
HSB430-157-3	3	4.33"/110.0	1.57"/40.0	1.38"/35.0	0.69"/17.50	7.01"/178.0	0.16"/4.0	0.12"/3.0	300 -
HSB490-200-3	3	4.92"/125.0	2.00"/50.8	2.32"/59.0	1.00"/25.40	11.14"/283.0	0.15"/3.8	0.15"/3.8	750 -
HSB520-135-4	4	5.25"/133.4	1.35"/34.3	3.00"/76.2	0.55"/14.00	10.02"/254.4	0.13"/4.1	0.16"/4.1	4/0-





Technical Data – Heat Shrinkable Breakout Boots

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D412, IEC 540	2120 psi (14.6 MPa)
Ultimate Elongation	ASTM D412, IEC 540	600%
Elongation after Heat Aging (168 hrs. at 175°C)	ASTM D412, IEC 540	520%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No dripping, cracking, flowing
Low Temperature Flexibility (-55°C)	ASTM D2671	No cracking
Flammability	ASTM D630	Self ext. within 1.97"
ELECTRICAL		
Dielectric Strength	ASTM D2671	280 V/Mil (11kV/mm)
CHEMICAL		
Water Absorption	ASTM D570	0.03%

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Shrink-Kon®

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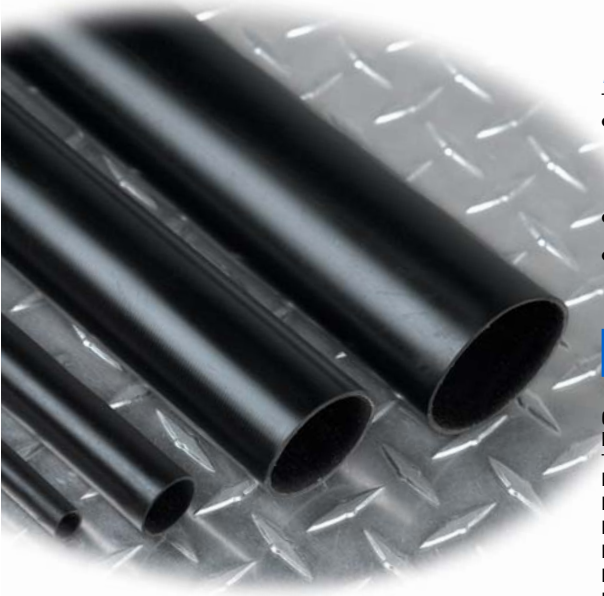

HSMW Series – Medium Wall

- More flexible than heavy wall product. Seals and protects cable splices and terminations.
- High resistance to impact and abrasion.
- Continuous operating temperature - 55°C to 110°C.
- Thermoplastic adhesive liner guarantees complete environmental protection and insulation.
- Shrink temperature 120°C.
- Shrink ratio 3:1.

HSMW Series Medium Wall Heat Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pack
HSMW400-48	.400"	.150"	.080"	#4 - #14 AWG	48"	25
HSMW750-48	.750"	.220"	.080"	4/0 - #8 AWG	48"	25
HSMW1100-48	1.100"	.400"	.080"	400 - #1 AWG	48"	25
HSMW1300-48	1.300"	.400"	.080"	600 - #1 AWG	48"	25
HSMW1500-48	1.500"	.500"	.080"	750 - 3/0 MCM	48"	25
HSMW1700-48	1.700"	.500"	.080"	1000 - 2/0 MCM	48"	25
HSMW2050-48	2.050"	.750"	.080"	250 - 600 MCM	48"	25
HSMW2750-48	2.750"	1.000"	.080"	500 - 1000 MCM	48"	15
HSMW3500-48	3.500"	1.180"	.095"	750 - 1250 MCM	48"	10
HSMW4700-48	4.700"	1.570"	.105"	1500 - 2500 MCM	48"	5
HSMW6700-48	6.700"	2.300"	.110"	–	48"	5
HSMW9000-48	9.000"	3.000"	.118"	–	48"	5

- Custom lengths available subject to factory quotations. Consult factory for availability.
- This item may require longer lead time for ordering. Minimum quantities may apply.

Technical Data – HSMW Series

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D412, ISO 37	2100 psi (14.5MPa)
Elongation	ASTM D412, ISO 37	550%
Longitudinal Change	ASTM D2671	+1%, -10%
Specific Gravity	ASTM D792, ISO/R1183	1.1
Elongation after Heat Aging (168 hrs. at 150°C)	ASTM D2671, ISO 37	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No cracking
Hardness (Shore D)	ASTM D2240	50D
ELECTRICAL		
Dielectric Strength	ASTM D149, IEC 243	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown
Volume Resistivity	ASTM D257	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to Excellent
Copper Corrosion	ASTM D2671	No Corrosion
Fungus Resistance	ASTM G21	No Growth
Water Absorption	ASTM D570	0.1%
ADHESIVE		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002 (mod)	125 psi (.875 MPa)
Adhesive Softening Point	ASTM E28	92°C/-5°C
Adhesive Peel Strength (300mm/min. at 23°C)	ASTM D1000	
• to steel, aluminum, P.E.		35 pli
• PVC		20 pli
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No penetration after 286 hrs. of continuous immersion

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Shrink-Kon®
Thin Wall Heat Shrinkable Tubing

Shrink Ratio 2:1

CPO Series – Thin Wall Tubing, Non-Lined

- Flame retardant.
- Resistant to common fluids and solvents.
- Meets UL 224, 125°C; CSA C22.2 No. 198.1, 125°C; MIL-DTL-23053/5 Class 1&2; AMS 3636 & 3637; DEF STAN 59-97, Issue 3, Type 2a.
- Continuous Operating Temperature - 55°C to 135°C.
- Shrink temperature: 120°C.

CPO Series Thin Wall Heat Shrinkable Tubing

(See sample order below) Cat. No.	Minimum Expanded I.D. in. (mm)	Maximum Reduced I.D. in. (mm)	Nom. Recovered Wall Thickness in. (mm)	Code Cable Size
CPO63-_-_	.063" (1.6)	.031" (.8)	.017" (.4)	–
CPO93-_-_	.093"" (2.4)	.046" (1.2)	.020" (.5)	–
CPO125-_-_	.125" (3.2)	.062" (1.6)	.020" (.5)	#24 - #30 AWG
CPO187-_-_	.187" (4.7)	.093" (2.4)	.020" (.5)	#14 - #22 AWG
CPO250-_-_	.250" (6.4)	.125" (3.2)	.025" (.6)	#10 - #16 AWG
CPO375-_-_	.375" (9.5)	.187" (4.7)	.025" (.6)	#6 - #12 AWG
CPO500-_-_	.500" (12.8)	.250" (6.4)	.025" (.6)	#1 - #6 AWG
CPO750-_-_	.750" (19.1)	.375" (9.5)	.030" (.8)	4/0 - #2 AWG
CPO1000-_-_	1.000" (25.4)	.500" (12.8)	.035" (.9)	350 - 2/0 MCM

Available in reels of 100' and 1000', consult Technical Service. U.L. 224. Available in other colors, consult Technical Service.
Material: Cross-linked Polyolefin. Temp. Range: 125°C.
U.L. Recognized File Number E137759 and CSA Certified. (Note clear material not U.L. Recognized).
Meets MIL-1-23053/5. (No marking on tubing). When ordering standard package, order by package not feet.
Use feet and inches only when ordering special cut lengths.
• Larger diameters available upon special request. Consult Customer Service.

Sample Order

Series		Color		Package Size		Final Order No.
CPO63	+	0	+	C	=	CPO63-0-C
		Available Colors		Available Packaging		

0 = Black
C = Clear
2 = Red
4 = Yellow
5 = Green
6 = Blue
9 = White
S = Green & Yellow Striped

A = 4'
B = Bulk (see page N11 for length)
C = 100'
25 = 25' reel

SHRINK-KON® Thin Wall Heat Shrinkable Tubing, 6 in. lengths

Cat. No.	Color	Minimum Expanded I.D. Inches (mm)	Maximum Reduced I.D. Inches (mm)	Nominal Recovered Wall Thickness Inches (mm)
CPO63-0-6	Black	.063 (1.6)	.031 (.8)	.017 (.4)
CPO93-0-6	Black	.093 (2.4)	.046 (1.2)	.020 (.5)
CPO125-0-6	Black	.125 (3.2)	.062 (1.6)	.020 (.5)
CPO187-0-6	Black	.187 (4.7)	.093 (2.4)	.020 (.5)
CPO250-0-6	Black	.250 (6.4)	.125 (3.2)	.025 (.6)
CPO375-0-6	Black	.375 (9.5)	.187 (4.7)	.025 (.6)
CPO500-0-6	Black	.50 (12.8)	.250 (6.4)	.025 (.6)
CPO750-0-6	Black	.750 (19.1)	.375 (9.5)	.030 (.8)
CPO1000-0-6	Black	1.00 (25.4)	.50 (12.8)	.035 (.9)

Thin-Wall Heat Shrinkable Tubing Kit

Cat. No.	Description	Std. Pkg.
HS-KIT	Assortment of six different sizes (from 3⁄16" to 1") of thin wall heat shrinkable tubing pre-cut to 6" lengths. Exceptional value, also includes handy plastic storage case.	1

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Custom Cut Length of Bulk Packaging – Thin Wall Tubing

To best meet your requirements for thin wall heat shrinkable tubing, Thomas & Betts welcomes the opportunity to cut bulk reels of tubing. Minimum order requirement is one standard bulk reel and multiples thereof. Tubing cannot be cut smaller than ½ inch.

When ordering custom cut lengths of tubing, order by piece, not by length. To determine the minimum number of pieces to order, simply figure how many pieces of a specific length of tubing is required to make use of a complete bulk reel.

Ordering Information

Family		Expanded ID	Bulk Reel Qty. Ft. (CMP only)	Color	Packaging
CPO =	*Cross Link Modified Polyolefin*	**63** = 1/16"	*1000*	**0** = *Black*	**A** = *4'*
		93 = 3/32"	*1000*	**C** = *Clear*	**B** = *Bulk (See price sheet for lengths)*
		125 = 1/8"	*1000*	**2** = *Red*	
		250 = 1/4"	*1000*	**4** = *Yellow*	
		375 = 3/8"	*500*	**5** = *Green*	**C** = *100'*
		500 = 1/2"	*400*	**6** = *Blue*	**25** = *25' Reel*
		750 = 3/4"	*300*	**9** = *White*	
		1000 = 1"	*300*	**S** = *Green & Yellow Striped*	

Example

Material	Size	Color	Package
CPO	**-375**	**-0**	**-C**

Minimum order quantity: Standard case quantities and multiples thereof. No broken packages may be ordered. To order colors other than black and clear 3/64" tubing CPO or specials/cut lengths, consult customer service for minimum order quantities, price and availability.

Example 1
If a bulk length of tubing is 1000 feet and the desired length of each individual piece is 6 inches, the minimum order requirement is 2000 pieces.

Given (length of reel)	*1000 Feet*
Convert to inches by multiplying by 12	*12 x 1000*
Length of reel in inches	*= 12000*
Divide by desired length	*12000÷6*
Total number of 6 inch pieces in a 1000 foot reel (Minimum Order)	*= 2000*

Example 2
If a bulk reel of tubing is 400 feet and the desired length of each individual piece is 2 inches, the minimum order requirement is 2400 pieces.

Given (length of reel)	*400 Feet*
Convert to inches by multiplying by 12	*12 x 400*
Length of reel in inches	*= 4800*
Divide by desired length	*4800÷2*
Total number of 2 inch pieces in a 400 foot reel (Minimum Order)	*= 2400*

Example 3
CPO125-0-7500
CPO material, size 125 (1/8"), black, 3/4 inches long.

Example 4
CPO500-6-1.500
CPO material, size 500 (1/2"), blue, 1 1/2" inches long.

Technical Data – Thin Wall Tubing

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D2671, ISO 37	2200 psi (15.0 MPa)
Elongation	ASTM D2671, ISO 37	400%
Longitudinal Change	ASTM D2671	+1%, -10%
2% Secan Modulus	ASTM D2671	16000 psi (110 MPa)
Specific Gravity	ASTM D792, ISO/R1183	1.3" (colors) 0.95" (clear)
Restricted Shrinkage	ASTM D2671	No Cracking
Elongation after Heat Aging (168 hrs at 175°C	ASTM D2671	350%
Heat Shock (4 hrs at 250°C)	ASTM D2671	No cracking or flowing
Low Temperature Flexibility (4 hrs at -55°C)	ASTM D2671	No cracking or splitting
Flammability	ASTM D2671	Flame Retardant (except Clear)
ELECTRICAL		
Dielectric Strength	ASTM D2671, IEC 243	600 V/Mil (24kV/mm)
Volume Resistivity	ASTM D2671	10^{16}OHM-CM
CHEMICAL		
Fluid Resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to Excellent
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.2%
Fungus Resistance	ASTM G21	No Growth

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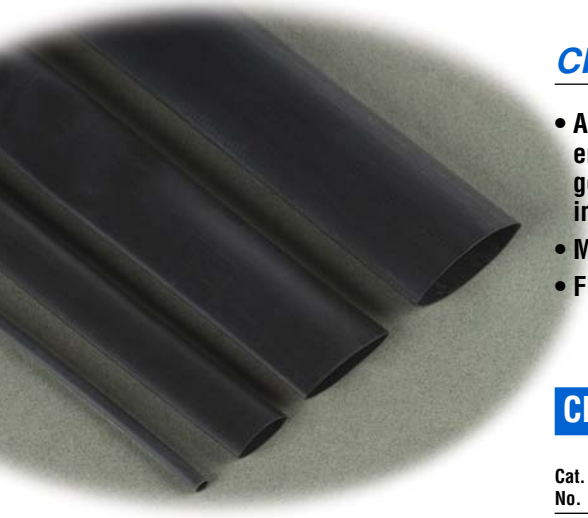
Shrink-Kon®
Thin Wall Heat Shrinkable Tubing

Shrink Ratio 3:1



CPO-A Series – Thin Wall, Adhesive Lined

- Adhesive lined heat shrink tubing with environmental sealing capability for general purpose commercial and industrial applications.
- Moisture-proof environmental seal.
- Flexible.
- High 3:1 shrink ratio for covering irregularly shaped objects.
- Continuous operating temperature - 55°C to 110°C.
- Shrink temperature 120°C.

CPO-A Series Thin Wall Heat Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pack
CPO-A-125-48	.125"	.023"	.038"	#24 - #30 AWG	48"	25
CPO-A-187-48	.187"	.060"	.045"	#14 - #22 AWG	48"	25
CPO-A-250-48	.250"	.080"	.047"	#10 - #22 AWG	48"	25
CPO-A-375-48	.375"	.135"	.050"	#6 - #16 AWG	48"	25
CPO-A-500-48	.500"	.195"	.055"	#2 - #12 AWG	48"	25
CPO-A-750-48	.750"	.313"	.065"	3/0 - #4 AWG	48"	25

NOTE: Non-standard colors, sizes and lengths available subject to factory quotation.
Standard color: Black

Technical Data – CPO-A Series

Property	Test Method	Typical Performances
PHYSICAL		
Tensil Strength	ASTM D2671, ISO 37	2200 psi (15.0 MPa)
Elongation	ASTM D2671, ISO 37	400%
Heat Shock (4 hrs. at 250°C)	ASTM D2671	No cracking or flowing
Longitudinal Change	ASTM D2671	+/-5%
Low Temperature Flexibility (4 hrs. at -55°C)	ASTM D2671	No cracking
Specific Gravity	ASTM D792, ISO R1183	1.1
2% Secant Modulus	ASTM 2671	1600 psi (110 MPa)
Heat Resistant Properties (168 hrs. at 175°C)	MIL-DTL-23053/4	240%
Flammability	ASTM D2671	Moderately Flame Retardant
ELECTRICAL		
Dielectric Strength	ASTM D2671, IEC 243	600 V/Mil (24kV/mm)
Volume Resistivity	ASTM D2671	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053/4, ISO 1817, ISO 37	Good to Excellent
Fungus Resistance	ASTM G21	No Growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.2%

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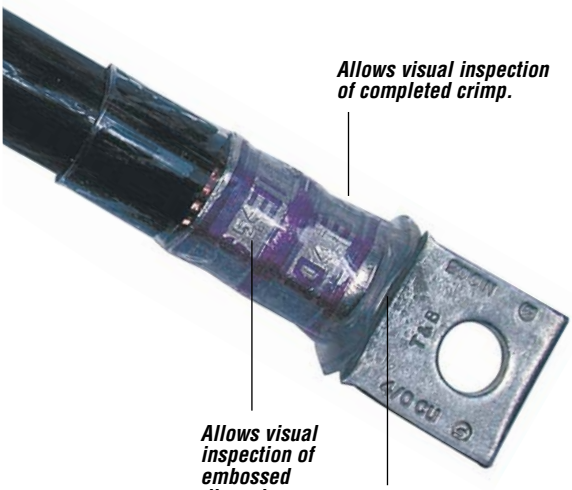
Shrink-Kon®
Thin Wall Heat Shrinkable Tubing

NEW PRODUCT

Shrink Ratio 2:1

CHS Series – Clear Thin Wall PVC Heat Shrink

- Flexible PVC Heat Shrink Tubing suitable for industrial and electronic applications. Allows user to inspect die and crimp details after installation of heat shrinkable insulation.
- UL standard UL224, VW-1 rated.
- CSA standard C22.2 no. 198.1 oft.
- Highly flame retardant.
- Flexible.
- Low shrink temperature of 110°C.
- Dielectric strength – 600 volts/MIL.


Allows visual inspection of completed crimp.
Allows visual inspection of embossed die code.
Inspection of cable through peep hole, shows that cable is properly positioned.

CHS Series Thin Wall Heat Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pack
CHS18	.125"	.063"	.020"	#22 - #18 AWG	50'	1
CHS18B	.125"	.063"	.020"	#22 - #18 AWG	250'	1
CHS14	.250"	.125"	.025"	#16 - #10 AWG	50'	1
CHS14B	.250"	.125"	.025"	#16 - #10 AWG	250'	1
CHS38	.375"	.188"	.025"	#8 - #6 AWG	50'	1
CHS38B	.375"	.188"	.025"	#8 - #6 AWG	250'	1
CHS12	.500"	.250"	.025"	#4 - #2 AWG	50'	1
CHS12B	.500"	.250"	.025"	#4 - #2 AWG	250'	1
CHS34	.750"	.375"	.035"	#1 - 3/0 MCM	50'	1
CHS34B	.750"	.375"	.035"	#1 - 3/0 MCM	250'	1
CHS100	1.000"	.500"	.035"	4/0 - 300 MCM	25'	1
CHS100B	1.000"	.500"	.035"	4/0 - 300 MCM	100'	1
CHS112	1.500"	.750"	.040"	350 - 700 MCM	25'	1
CHS112B	1.500"	.750"	.040"	350 - 700 MCM	100'	1
CHS200	2.000"	1.000"	.045"	750 - 1000 MCM	25'	1
CHS200B	2.000"	1.000"	.045"	750 - 1000 MCM	100'	1

Standard color: Clear

Technical Data – Clear Thin Wall PVC

Property	Test Method	Typical Performance
PHYSICAL		
Tensil Strength	ASTM D2671, ISO 37	3300 psi (23.0 MPa)
Elongation	ASTM D2671, ISO 37	300%
Longitudinal Change	ASTM D2671	+/-10%
2% Secant Modulus	ASTM D2671	16000 psi (110 MPa)
Specific Gravity	ASTM D792, ISO R1183	1.31
Elongation after Heat Aging (168hrs at 136°C)	ASTM D2671, ISO 37	250%
Heat Shock (4hrs at 250°C)	ASTM D2671	No cracking or flowing
Low Temperature Flexibility (1hrs at 10°C)	ASTM D2671	No cracking or splitting
Flammability	ASTM D2671	Self Extinguishing
ELECTRICAL		
Dielectric Strength	ASTM D2671, IEC 243	600 V/Mil (24kV/mm)
Volume Resistivity	ASTM D2671	10^{16} ohm-cm
CHEMICAL		
Fluid Resistance	MIL-DTL-23053 ISO 1817, ISO 37	Good to Excellent
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.3%
Fungus Resistance	ASTM G21	No Growth

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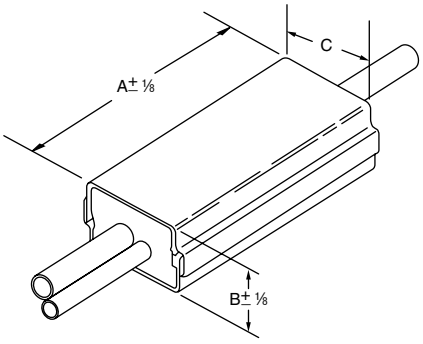
Shrink-Kon®

Splice Insulators and Insulating Covers

H-Tap Insulating Covers (Hard Covers)

Cat. No.	Dimensions (in.) A (Lgth)	B (Thick)	C (Width)
HTC2S	2"	1⅛"	1⁷⁄₁₆"
HTC2	3½"	1⅛"	1⁷⁄₁₆"
HTC40	4¼"	1⁹⁄₁₆"	2"
HTC40L2	5¾"	1⁹⁄₁₆"	2"
HTC500	6"	1¾"	2¾"
HTC1000	7"	2⅜"	3⅞"
HTC1000L	10"	2⅜"	3⅞"

Interlocking insulating covers for "H" type compression taps. For use in splice boxes, indoors, or in tray indoors.
Place the H-Tap in the cover. Snap the cover closed.



Technical Data – H-Tap Insulating Cover (Hard Cover)

HTC2 and HTC2S use insulation wrap instead of end cushions for inner seal.
Connector Cat. Nos. 54755 through 54790 and 63148 through 63180 require hydraulic crimping tools. Refer to instruction sheets.
Outer Hard Shell Covers — High Impact Black Thermoplastic (Noryl) Flammability Class, U.L. 94V-1
Inner seal — Black neoprene sponge soft closed cell, oxygen index 28% U.L. 94 HBF
Temperature Rating — 90 °C Maximum
Voltage Rating — 600 Volts maximum
Uses insulation wrap instead of end cushions for inner seal.
Note: insulation covers are not reusable.

For H-Tap Applications

Cover Cat. No.	AL/CU H-Tap No.	CU H-Tap
HTC2	63105	
HTC2S		CHT814-10
HTC40	63110	CHT214-9
	63118	CHT250214-8
	63125	CHT2514-7
	63140	CHT2502-6
HTC500	63148	CHT50010-5/CHT50040-4
	63160	CHT75010-3/CHT750350-2
HTC1000L	63170	
HTC1000	63180/63169	CHT750350-1F

For C-Tap Applications

Cover Cat. No.	C-Tap No.	Color Code
HTC40	54720	Brown
	54725	Green
	54730	Pink
	54755	Blue
	54760	Brown
HTC40L2	54735	Black
	54740	Orange
	54745	Purple
	54750	Yellow
HTC500	54765	Pink
	54770	Black
	54775	Yellow
	54780	White
	54785	—
HTC1000	54790	—

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Shrink-Kon®

Splice Insulators and Insulating Covers

Easily and quickly insulates H type compression taps. Eliminates taping. Provided with three positive locking latches and overlapping fringe for maximum cable insulation.

H-Tap Insulating Covers (Soft Cover)

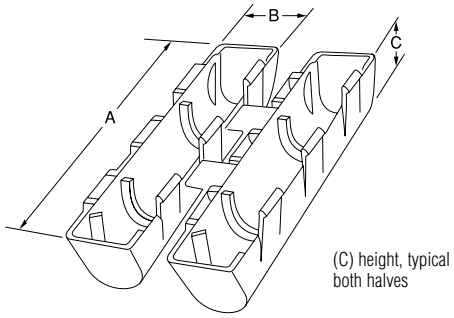
Cat. No.	Wire Range Min.	Wire Range Max.	Installs "H" Tap Cat. No.
HT20C	6	2/0	63110 & 63125
HT40C	6	4/0	63140 & 63148
HT600C	2	500 MCM	63160 & 63169
HT1000C	1/0	750 MCM	63180
HT1000C-L	1/0	1000 MCM	63170

Technical Data – H-Tap Insulating Cover (Soft Cover)

Rating: 90°C, 600V. Made of flame retardant, high impact polypropylene.
Material: Polypropylene
Color: Black
Voltage Rating 600V max.
Temperature: 90°C

H-Tap Splice Insulators and Insulating Covers

Cat. No.	Wire Range Max.	Wire Range Min.	Use to Insulate T&B Taps		A in.	B in.	C in.	"A" Dim.	"B" Dim.
HT20C	2/0	6	63110/63115 63125/63120		4½"	1¼"	1⅛"	—	—
HT40C	4/0	6	63140 63148		5$^{39}/_{64}$"	1$^{13}/_{32}$"	1$^{3}/_{16}$"	—	—
HT600C	500 MCM	2	63160	63169	6$^{13}/_{16}$"	2⅛"	1$^{29}/_{64}$"	—	—
HT1000C	1000 MCM to 500 MCM	250 MCM to 1/0 AWG	63180		—	—	—	[184.15MM] 7.250	2.330 +.060
HT1000C-L	1000 MCM to 500 MCM	250 MCM to 250 MCM	63170		—	—	—	[263.40MM] 10.374	2.330 +.060



(C) height, typical both halves

N

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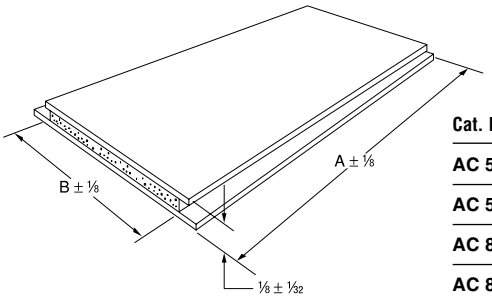
Shrink-Kon®

Splice Insulators and Insulating Covers

Adhesive Insulating Covers

General Information:
- ***Voltage Rating up to 600 Volts.***
- ***Adheres to Metals, Rubber and Synthetic Materials.***
- ***Seals against Moisture.***
- ***Workable from 14°F to 120°F.***
- ***Maximum Operating Temperature 176°F.***
- ***No installing tools required.***



Cat. No.	A	B
AC 5 x 3	5"	3"
AC 5 x 7	5"	7"
AC 85 x 75	8.5"	7.5"
AC 85 x 105	8.5"	10.5"

Adhesive Insulating Covers

Adhesive Insulator Cat. Nos.	Compression Lug Cat. Nos.										Compression Two-Way Connector Cat. Nos.		"H" Tap Cat. Nos.	"C" Tap Cat. Nos.	Compression Cable Joint Cat. Nos.
AC 5 x 3 Size Key #2	60096	60113	60130	60150	54132	54145	54160	54207	54906	54860	60500	54806	63105	54710	54610
	60097	60114	60132	60151	54134	54108	54162	54208	54942	54862	60501	54807		54715	54615
	60099	60116	60134	60230	54105	54147	54163	54255	54947	54864	60507	54806		54720	54620
	60101	60117	60135	60236	54135	54148	54111	54209	54909	54866	60512	54504		54725	54625
	60102	60118	60136	60238	54136	54150	54165	54210	54910		60516	54505		54730	54630
	60103	60120	60138	60242	54138	54152	54167	54260	54965		60905	54506		54735	54635
	60104	60122	60140	60244	54106	54153	54168	54211	54970		60910	54507		54740	
	60106	60123	60141	60248	54139	54109	54112	54265	54850		60915	54506		54745	
	60107	60124	60142	60250	54140	54155	54170	54212	54852		60920	54509		54750	
	60108	60126	60144	54104	54107	54157	54204	54270	54854		60925	54510			
	60109	60128	60147	54130	54142	54158	54205	54930	54856		54804	54511			
	60112	60129	60148	54131	54143	54110	54206	54905	54858		54805				
AC 5 x 7 Size Key #4		60152	60169	60267	54173	54115	54129	54222	54920		60522	60945	54516	63110	54755	54640
		60153	60171	60268	54174	54183	54213	54291	54923		60530	60950	54518	63115	54760	54645
		60154	60172	60269	54113	54116	54275	54223	54928		60538	60955	54809	63120	54765	54650
		60156	60174	60271	58161	54185	54214	54295	54868		60542	60960	54810	63125	54770	
		60157	60176	60273	58162	54118	54280	54224	54870		60548	60965	54811		54775	
		60159	60178	60274	58163	54187	54215	54226	54872		60554	60970	54812		54780	
		60160	60180	60275	58165	54120	54282	54228	54874		60560	54509	54813			
		60162	60254	60276	58166	54122	54216	54913	54876		60565	54510	54814			
		60163	60256	60277	54178	54123	54218	54914	54878		60568	54511	54815			
		60165	60260	60278	54179	54124	54286	54915	54880		60571	54512	54816			
		60166	60262	60280	54114	54126	54220	54916	54882		60930	54513	54817			
		60168	60265	54172	54181	54128	54289	54918			60935	54514				
											60940	54515				
AC 85 x 75 Size Key #6					60184						60574	54522	63130		
					60284						60576	54523	63135		
											60578	54524	63140		
											60580	54526	63145		
											60584	54528	63150		
											60975	54820			
											60980	54823			
											60985	54828			
											54520				
AC 85 x 105 Size Key #8													63155		
													63160		
													63165		

* U.L. Listed for use with T&B Covers
For "H" Taps, "C" Taps, two way connectors, mechanical taps and Color-Keyed lugs and joints.
Material: 6 mil electrical vinyl backing, butyl rubber mastic adhesive thickness ⅛ inch approx.
Polyethylene release sheet.
U.L. Listed—File No. E9809
Not for submersion in liquid.

Electrical Properties
Dielectric constant 3.2 ASTM-D150 (60 Hz)
Power factor 007 ASTM-D150 (60 Hz)
Dielectric strength 340 Volts/mil ASTM-D1373
Chemical Properties

Water absorption .06% ASTM-570
Ozone resistance—excellent .03% ASTM-D1373
Corrosion none visable—per ASTM-D 69
Also available in 10' rolls.
Consult customer service.

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HSTS25 - Tape Sealant

- **Tape sealant should be used in conjunction with T&B Heat Shrinkable Insulators for better moisture sealing.**

HSTS25

Cat. No.	Description	Width	Thickness	Length
HSTS25	Tape Sealant	1"	1/16"	25 ft.

1. The cable, etc. should be relatively clean and free of greases, oils, and other foreign substances.
2. It is best to overlap each wrap of tape by ¼ to ½ the width for the best seal.
3. When using heat shrinkable products most applications require only 1 or 2 layers of tape prior to sliding tubing in place.
4. Shrink the tubing, cap, boot, etc. following the installation procedure for the applicable heat shrinkable part.

To seal the junction or crotch of application requiring two or more cables, conductors, etc. without a common jacket.

1. Apply the overlapped 1 or 2 layers around each cable, conductor, etc. at the same distance from the connector or, ball up the sealant and press into crotch or junction of the joint.
2. Apply 2 overlapping wraps over the bundle.
3. Slide the expanded heat shrinkable part over the joint and shrink.

Technical Data – HSTS25 - Tape Sealant

Property	Test Method	Typical Performances

PHYSICAL
Description: Butyl Rubber Polymer
Application Temperature: 40°F to 100°F
Service Temperature: -40°F to 180°F
Environmental Resistance: Resists ozone and all normal aging processes.

ELECTRICAL
Dielectric Strength: 250 v/mil minimum
Volume Resistivity: 10^{14} ohms/cm.

CHEMICAL
Chemical Resistance: Resists acids, bases and alcohols. Passes Fed. Spec. SS-S-00210, section 3.6.

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Medium Voltage Motor Stub Splice Insulator

Lets you insulate and waterproof motor lead connections up to 5KV — quickly, dependably.

- Installs in seconds.
- Waterproof and abrasion resistant.
- One size fits all hookups — reduces inventory.
- Allows easy inspection of connection.
- Long lasting and reusable.
- Quality engineered.

This insulator is designed to give you a quick, dependable means of protecting medium voltage motor stub splice connections up to 5KV. You can install it in seconds simply by pushing the cover and boot together. Once installed, it completely waterproofs the connection and provides excellent protection against abrasion or mechanical abuse.

One size reduces inventory.

The insulator accommodates wire sizes #8-2/0 AWG having outer diameters of .375 to .840. This range-taking feature should accommodate all of your medium voltage motor hookups.

Inspectable and reusable.

The insulator consists of just two parts: an elastomer boot and thermoplastic cap. The boot has two tapered cable entry legs that fit snuggly around the cable to form a watertight seal. The legs are designed to be trimmed during installation to tightly fit the required cable size. The cap simply pushes into a groove in the boot — and pulls out easily when you want to inspect the connection. Removal of the cap does not disturb the seal around the cables nor does it interrupt the bolted splice connection.

Quality engineered.

The boot is made of flexible, abrasion-resistant elastomer; the cap of high impact-resistant thermoplastic — high performance materials you can depend on. Use the insulator for pigtail applications in motor junction boxes, manholes, or wherever a waterproof, impact-resistant insulator is required.

The MSCV20 is a first generation completely waterproof multi-splice insulator which consists of only two parts, an elastomeric boot with two tapered cable entry protrusions and a hard plastic cover cup. When mated with the elastomeric boot the cover cap provides durable mechanical protection as well as a water tight installation. The insulator is designed for pigtail applications and can be used anywhere. Installs in seconds lowering the installed cost, versus conventional methods.

Medium voltage (5 KV) multi-splice insulator

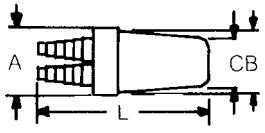
- ***Water tight***
- ***Flame retardant***
- ***Flexible boot***
- ***Impact resistant cap***
- ***5000 volts @ 90°C***
- ***Range taking***
- ***Reusable***
- ***Fast-easy to use***
- ***Inexpensive***
- ***Dependable***

Wide Range Splice

Cat. No.	600 Volts Wire Range	Insulation O.D. Range	Bolt Max. Length	Length L ±1/16	Dia. A ±1/32	Dia. B ±1/32	Dia. C ±1/32
MSCV20	2 AWG-350	.375-.840	1¼	6½	3	2 21/32	2

Technical Data – Medium Voltage Motor Stub Splice Insulator

5KV wire range #8 AWG-2/0
Rating: 90°C applications
U.L. Listed to 600 volts
CSA certified to 600 volts
T&B recommended to 5000 volts
Material: Cap - NORYL, U.L. 94V-1
Boot - EPDM Elastomer, U.L. 94V-2
Lubricant - Silicone Grease



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Shrink-Kon®

Splice Insulators and Insulating Covers

Multi-splice insulator permits fast, dependable insulation and waterproofing of outdoor and buried connections up to 600V. The reusable insulator snaps closed and can be opened for inspection.

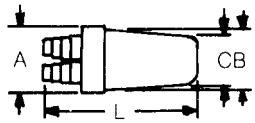
Quick Seal Multi-Splice Insulators

600 volts at 90°C. All-purpose quick seal multi-splice can be used wherever a watertight insulator is needed in motor junction boxes, manholes, street lighting, bridges, machines, rooftop air conditioning, airport lighting, as well as in marine use. The insulator is of a two-piece design, an abrasion-resistant elastomer cable entry boot and a high impact-resistant thermoplastic quick seal cap. It is fast and easy to use. Installs in seconds, completely waterproof, long lasting, reusable, inspectable, flame retardant, impact-resistant, range taking, inexpensive and totally dependable.

Quick Seal Splice Insulators

Cat. No.	Wire Range	Insulation O.D. Range	Length L ±1/16	Dia. A ±1/32	Dia. B ±1/32	Dia. C ±1/32	Bolt Size Max. Dia.	Bolt Size Max. Lg.	Conn. Size Max. Lg.	Conn. Size Max. Wd.
MSLT 8	14-8	.150-.280	2 5/8	1 7/32	1 1/32	13/16	1/4	1/2	1 1/4	.5
MSLT 1	6-1	.200-.520	3 5/8	1 13/16	1 17/32	1 1/4	3/8	3/4	1 3/4	.7

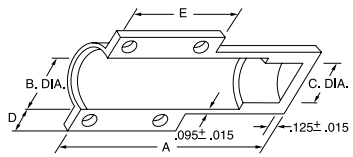
MSLT8



Technical Data

Material: Cap - NORYL, U.L. 94V-1 Boot - EPDM Elastomer, U.L. 94V-2 Lubricant - Silicone Grease

- ***Reenterable waterproof motor stub insulator.***
- ***Easy installation.***
- ***No special tools required.***
- ***Permits inspection of connector joint by simply removing the snap on cap.***
- ***Wide cable range.***
- ***Long life.***



Motor Stub Splice Insulators

Lets you inside motor lead connections dependably … in seconds. This innovative product has been designed to insulate motor stub splices quickly, easily and dependably. It consists of a boot-type insulator with integral TY-RAP® cable ties. To install, simply position the insulator over the bolted splice, and tighten the cable ties. That's all there is to it. It produces uniform, high quality installations every time … in about 30 seconds. The completed installation is immediately ready for inspection and use. If required, the insulator can be easily removed. Simply snip the cable ties and slide the insulator off the splice. It leaves no sticky residue.

Motor Stub Splice Insulators

Cat. No.	Wire Range	Terminals	Bolt Max. Length (in.)	A ±.062	B Dia. ±.031	C Dia. ±.031	D ±.031	E ±.062
MSC14*	#14-#10	14RB4 thru 14RB10 RB14 thru RB14-10 10RC6 thru 10RC10 RC10-6 thru RC10-10	3/8"	1.5	.555	.495	.375	.35
MSC8	#12-#8	—	3/8"	2.39	.725	.665	.375	1.2
MSC2	#12-#2	—	3/4"	3.25	.947	.877	.375	1.5
MSC20	#2-2/0	—	1"	4.25	1.385	1.05	.425	1.7
MSC250	3/0-300 MCM	—	1 1/2"	7.562	1.875	1.795	.445	1.9
MSC500	350-500 MCM	—	13/4"	8.875	2.562	2.482	.445	2.1

Technical Data

* One TY-RAP cable tie only.
U.L. File E9809. U.L. and CSA certified (94V-1 Flammability Class).
Rated for 600 volt and 90°C application.
Material: Modified Neoprene Elastomer – Body Nylon – Straps.

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Heavy Duty Self-Igniting Torch

Built to last.

The Shrink-Kon® Torch is engineered to provide years of long, dependable and efficient service. The body is constructed of strong, lightweight cast aluminum; burn tube and conduit of stainless steel; venturi, orifice and burn tips of solid brass. Two separate burn tips are available, one for heat shrinkable tubing, one for brazing and soldering.

Torch easily screws to all commercially available 14 and 16 oz. propane cylinders.

- ***Heavy duty self-igniting torch is built for the professional.***
- ***Single hand ignition makes shrinking, brazing and soldering fast, easy and efficient—at all angles, even upside down, and in windy conditions.***
- ***Torch easily screws to all commercially available 14 and 16 oz. propane cylinders.***
- ***Trigger ignition lights the SHRINK-KON® Torch automatically—no flints, batteries, or strikers to wear out—its piezo electric crystal provides over 30,000 ignitions before servicing, generating 24,000 volts to ignite the torch instantly.***
- ***Its built-in pressure regulator provides a constant gas flow rate in all positions so your torch won't flare out when you need it most—upside down, turned on its side, or in windy conditions.***
- ***Perfect for heat shrinkable tubing, brazing sheet metal and light steel, or soldering applications.***

SIT-1

SIT-2

Heavy Duty Self-Igniting Torch

Cat. No.	Description
SIT-1	SHRINK-KON® Torch for 14 or 16 oz. cylinders
SIT-2	Adapter and 5 foot extension hose

WT1400

Electric Heat Gun

Cat. No.	Description
WT1400	Dual Speed/Temp. 450-1000°F 1400 watts requires 12-18 amp outlet

U.L./CSA approved
450°F to 1000°F heat range.
120 V. 60 Hz A.C.
Note: Other installation tools are available. Contact your Local Distributor or Thomas & Betts Technical Service Department.

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Installation

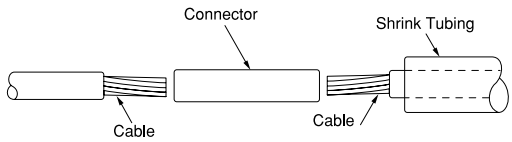

Figure 1
1. Connector and Heat Shrinkable Tubing prior to installation.

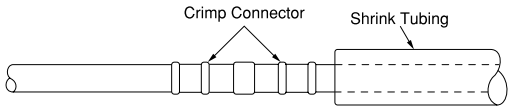

Figure 2
2. Crimp connector installed.

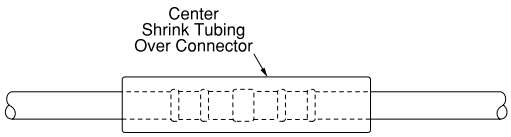

Figure 3
3. Heat Shrinkable tube in position.

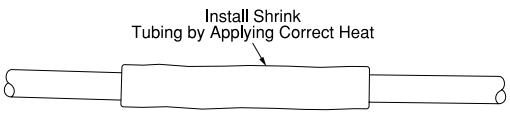

Figure 4
4. Heat Shrinkable tube after heat application.

Factory Applied Sealant

A standard sealant is coated on the entire inside surface of most precut sizes. Tubing is also available without sealant – consult factory. The sealant is rated for continuous 90°C operation on non-pressurized cable systems and aids in sealing out moisture and corrosion.

Cost and Reliability of Heat Shrinkable Tubing compared to tape

The cost differential in the installation of T&B heat shrinkable tubing over taping can result in up to a 34% savings in labor and overhead. For example, on a 2/0 aluminum splice, heat shrinkable tubing can be installed in 3 minutes versus 10 minutes of taping. In addition to the direct cost reduction, there are the advantages of assured uniformity of wall thickness and moisture sealing.

No Special Installation Skills Required

1. Remove any oil, grease, water, dirt, etc., by wiping the cable ends and connector. **Remove all sharp edges and burrs from connector.**

2. Center tubing over splice connector.

3. Use the light blue outer portion of the flame when using the SIT-1 torch. Do not hold the torch still in one position or concentrate the hot inner flame of the torch on the tubing; this may cause scorching.

4. Begin heating tubing in the center. Recover the central portion of the tubing first by heating around the circumference of the splice. (Keep heat source moving constantly around the circumference of the insulator to ensure uniform shrinkage of the insulator.)

5. Continue heating around the tubing and out toward one end. Move torch around the tubing until one end is completely recovered.

6. Repeat the above procedure on the opposite end of the splice, again working from the center outward and around the tubing.

7. Installation is complete when the tubing conforms to splice and sealant flow is apparent at both ends.

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Cross Reference

T&B	Panduit	3M	Raychem	Sumitomo	Alpha	Coleflex	Insultab
CPO	HSTT & HSTTM	FP 301 (1 & 2)	RNF 100 (1 & 2)	A2 & B2	FIT 221	ST221 / STS221 STU221 / STSU221	HS 101
CPO-A	HSTTA & HSTTVA	EPS300	TAT 125 ATUM 3:1	— W3B2	— FIT321	— ST303	— HS101 MW 3:1
HSMW	—	—	MWTM (U) BSTS-M / SST-M	—	—	—	CTV
HS	—	—	WSCM / SST	—	FIT 700	—	—
HS FR	HST	HDT	BSTS FR / SSTFR WCSF / FCSM	—	—	—	CTVH
HSC	HSEC	ICEC	S3C/ESC SSC-FR / ESC-FR	—	—	TYT —	—
CPO-HF	—	—	—	NH	—	—	—
HSM-HF	—	—	XFFR	—	—	—	—
NEW **CHS**	—	—	—	—	—	—	—

Typical Specifications

Insulating and sealing of all 600 Volt, in-line cable splices from #16AWG through 1000MCM shall be done in accordance with the instructions provided with the Shrink-Kon® heat shrinkable insulators, catalog series HS.

The connector insulator must be made of thermally stabilized, homogeneous polyolefin having internally applied sealant. It must have Underwriter's Listing (UL486, 90°C, 600V) and be approved for the use. It must be usable without additional covering or adhesive both indoors and outdoors, in overhead, direct burial, or submersed applications at rated voltage. It must not be adversely affected by moisture, ozone, oils, fuels, mild acids and alkalies, or ultraviolet light. It must be compatible with all commonly used cable jacket materials including rubber, plastic, lead, steel, aluminum, and copper.

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